SCALABLE ARCHITECTURE FOR CORRESPONDING
MULTIPLE VIDEO STREAMS AT FRAME RATE

5 **ABSTRACT**

An image processing system which processes, in real time, multiple images, which are different views of the same object, of video data in order to match features in the images to support 3 dimensional motion picture production. The different images are captured by multiple cameras, processed by digital processing equipment to identify features and perform preliminary, two-view feature matching. The image data and matched feature point definitions are communicated to an adjacent camera to support at least two image matching. The matched feature point data are then transferred to a central computer, which performs a multiple-view correspondence between all of the images.